

ABSTRACT

A method and apparatus for treating the surfaces of individual filaments in a multifilament yarn. The method includes the steps of immersing the yarn into a liquid treatment solution and coating all exposed surface areas of each individual filament with the treatment solution, disrupting the orientation of the individual filaments and coating all newly exposed surface areas of each individual filament with the treatment solution, and repeating the previous steps until a predetermined treatment level is achieved. The method and apparatus may eliminate the use of surfactants in many treatment processes. The yarn and the treatment solution may be agitated to increase the orientation disruption of the individual filaments. Orientation disruption may include the repeated changing of the direction of travel of the yarn during treatment. The method is particularly effective in plating highly anisotropic uniaxially oriented polymer fibers, such as PBO.